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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/522,683	01/30/2006	Yong-Kuk Yun	YOM-0221	1779
23413	7590	10/27/2006		
CANTOR COLBURN, LLP 55 GRIFFIN ROAD SOUTH BLOOMFIELD, CT 06002			EXAMINER	
			WU, SHEAN CHIU	
			ART UNIT	PAPER NUMBER
			1756	

DATE MAILED: 10/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/522,683	YUN ET AL.
	Examiner	Art Unit
	Shean C. Wu	1756

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 31 January 2005 and 21 April 2006.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-15 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-15 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 31 January 2005 is/are: a) accepted or b) objected to by the Examiner.

 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 1/31/05.

4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
5) Notice of Informal Patent Application
6) Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

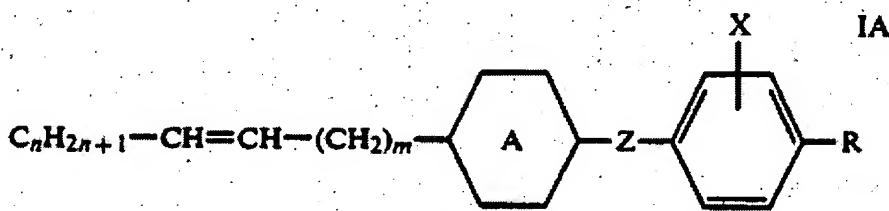
Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-2 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Buecker et al. (US 4,770,503).

The reference discloses liquid crystal compounds of the formula I



, wherein $m=4-7$, $n=0$ or a positive whole number, $A=\text{cyclohexylene}$, $Z=CH_2CH_2$, $X=F$ and $R=NCS$. Also, see formula Ih (in claim 21) and the compounds of

fluorinated cyclohexylephenylisothiocyanate in Example 2. The reference mixture and display thereof containing the present chemical formula 1 are disclosed in claims 22 and 23 (see col. 8, lines 26-33 for the percentage used in the mixture). The suitable compounds used in the reference mixture are shown on col. 8, particularly, the formula XXV, which reads on the present chemical formula 6.

Therefore, the reference anticipates the claimed invention.

4. Claims 4, 7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over BucHECKER et al. as applied to claims 1-2 and 6 above in view of Hayashi et al. (US 6,221,544).

BucHECKER differs from the claims in that the claims have more specific components in the liquid crystal display device. Hayashi discloses the present components in display device. See Figure 8, which comprises each component of the present display device. Because Hayashi et al teach the present display device, it would have been obvious to those skilled in the art to apply the liquid crystal mixture of BucHECKER into the device of Hayashi to arrive at the claimed invention.

5. Claims 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over BucHECKER et al. as applied to claims 1-2 and 6 above, in view of Hayashi et al. (US 6,221,544) and further in view of Kong et al. (US 2002/0053701 or 6,590,226).

Kong differs from the claims in that the claims have more specific components in the liquid crystal display device. Kong discloses the present components in display device. See Figure 3, which comprises each component of the present display device.

Because Hayashi et al in view of Kong teach the present display device, it would have been obvious to those skilled in the art to apply the liquid crystal mixture of Buchecker into the device of Hayashi in view of Kong to arrive at the claimed invention.

6. Claims 4, 7 and 9-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buchecker et al. as applied to claims 1-2 and 6 above in view of Takizawa et al. (US 6,573,964).

Buchecker differs from the claims in that the claims have more specific components in the liquid crystal display device. Takizawa discloses the present components in display device. The reference (US '964) figures comprise each component including domain-regulating unit of the present display device. Because Takizawa et al teach the present display device, it would have been obvious to those skilled in the art to apply the liquid crystal mixture of Buchecker into the device of Takizawa to arrive at the claimed invention.

7. Claims 4, 7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buchecker et al. as applied to claims 1-2 and 6 above in view of Park et al. (US 6,970,220 or US 2002/0113931).

Buchecker differs from the claims in that the claims have more specific components in the liquid crystal display device. Park discloses the present components in display device. See Figure 1 and claim 1. Because Park et al teach the present display device, it would have been obvious to those skilled in the art to apply the liquid crystal mixture of Buchecker into the device of Park to arrive at the claimed invention.

8. Claims 1-3 and 5-6 are rejected under 35 U.S.C. 102(e) as being anticipated by Ban et al. (US 20050062018)

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

Double Patenting

9. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

10. Claims 1-2 and 5-6 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-20, 22 and 25 of U.S. Patent No. 7,045,176. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claimed subject matters are encompassed by US '176.

11. Claims 1-2 and 6 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-10 of U.S. Patent No. 7,063,805. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claimed subject matters are encompassed by US '805.

12. Claims 1-2 and 6 provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-15 of copending Application No. 10/493,717. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claimed subject matters are encompassed by US '717.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shean C. Wu whose telephone number is 571-272-1393. The examiner can normally be reached on 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Shean C. Wu
Primary Examiner
Art Unit 1756

scw